LEAN 101

PokaYoke
(Error-proofing/Fool-proofing)

POKAYOKE: *Japanese for 'mistake-proofing'. Mistake-proofing and fool-proofing devices made by designing items, processes, or procedures so that mistakes physically or procedurally cannot happen. PokaYoke workers are not blamed for the errors, but instead find ways to keep errors from becoming defects. A service request-taking example is a* <u>screening</u> *for request input developed from traditional request patterns that question requests falling outside the pattern. The "outlying" requests are then examined, often leading to the discovery of inputting errors or action based on misinformation. A poka-yoke is sometimes called a baka-yoke. [Also called Fool-Proofing, Error-Proofing, Mistake-Proofing, or Zero Quality Control (ZQC)].*

Lean 101 - PokaYoke (Error-proofing)

Lean = Doing it right the first time

PokaYoke (pronounce the ending *e*, *poka-yoki*), or mistake- or fool-proofing, is a Japanese word for an extremely simple concept that, using common sense, has been applied forever. It's the use of simple mechanisms to prevent mistakes from being made by workers, without requiring special effort on their part.

Pokayokes or fail-safe devices are generally very simple and often inexpensive visual prompts that prevent errors in the work being done. Either the worker is alerted that a mistake is about to be made, or the device actually prevents the mistake from being made. The important point of these types of mechanisms is that 100% of the work is checked without the need for any special attention from the worker.

The term *PokaYoke* was popularized by Shigeo Shingo through his book "Zero Quality Control: Source Inspection and the PokaYoke System."   He pointed out that mistakes will always be made (none of us are perfect !), but if PokaYokes are implemented, then mistakes can be prevented from becoming defects (mistakes that reach the customer).

Examples of PokaYoke devices include jigs with pegs/stops that will allow an item to be inserted only one way round or perhaps color-coding items or groups of items/work so that they cannot be mixed up. (Think of Norm Abrams on the *Yankee Workshop* & *This Old House* and his jigs and workshop or think of color-coded forms.)

By eliminating the error at the source, the cost of mistakes within a company is reduced, as well as any adverse impact for the customer. Usually, quality inspection is carried out at the end of the process or series of processes.   If the mistake was made at the beginning or middle of the process, then time and money has been invested in that work all the way along up to the point it is inspected. This increases the cost of the mistake and the time needed to provide a good service/work for the customer. It is also possible (especially if the work is less than 100% inspected) that the error may carry on into other work processes, further increasing the cost of the error, leading to the possible need for rework, and the magnification of the mistake for both the organization and the customer.

To get the full benefit from their use, PokaYokes should be shared across offices, departments, and processes so that others can see them in action and be motivated to think of their own.

Keep in mind that PokaYokes are an effective and relatively inexpensive way of reducing errors/defects and, as a result, the costs of assuring quality. However, consideration should always be given as to why it was possible to make the mistake in the first place and therefore need a Pokayoke. A long-range aim might be to eliminate the source of problem not just prevent it from occurring, and this might be best achieved in the design stage.